

**RECEIVED
CENTRAL FAX CENTER****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES****DEC 30 2003****OFFICIAL**

Appl.No.: 09/542,888
Appellant: Hoyle
Filed: April 4, 2000
TC/A.U. 2124
Examiner: Ngo

Confirmation No.: 5971

Docket No.: TI-28591
Cust.No.: 23494

APPELLANT'S BRIEF (in triplicate)

#7
J. Catting
1-6-04

Commissioner for Patents
P.O.Box 1450
Alexandria VA 22313-1450

Sir:

The attached sheets contain the Rule 192(c) items of appellants' brief.
The Commissioner is hereby authorized to charge the fee for filing a brief in support of the appeal plus any other necessary fees to the deposit account of Texas Instruments Incorporated, account No. 20-0668. A fee transmittal sheet is enclosed.

Respectfully submitted,



Carlton H. Hoel
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Rule 192(c)(1) Real party of interest

Texas Instruments Incorporated owns the application.

Rule 192(c)(2) Related appeals and interferences

There are no related dispositive appeals or interferences.

Rule 192(c)(3) Status of claims

Claims 1-6 are pending in the application with all claims finally rejected. This appeal involves the finally rejected claims.

Rule 192(c)(4) Status of amendments

There is no amendment after final rejection.

Rule 192(c)(5) Summary of the invention

The invention provides a method of fast Fourier transform (FFT) implementation using a sequential memory access; this may take advantage of cache memory. Figures 1 and 3 illustrate the sequence of butterfly computations for a preferred embodiment and the prior art, respectively; and application pages 4-5 describe the operations of these figures.

Rule 192(c)(6) Issues

The issues presented on appeal are:

- (1) whether claims 1-4 and 6 are anticipated by the Brockmeyer reference.
- (2) whether claim 5 is patentable over the Brockmeyer reference.

Rule 192(c)(7) Grouping of the claims

The claims are treated as a single group.

Rule 192(c)(8) Argument

- (1) Claims 1-4 and 6 were rejected as anticipated by Brockmeyer.

Appellant replies that Brockmeyer has a filing date of 07/10/2000 and claims priority from a provisional application with a filing date of 07/9/1999. In contrast, the present application has a filing date of 04/04/2000 and claims priority from provisional application 60/128,340 with a filing date of 04/08/1999. Consequently, Brockmeyer is not a reference.

(2) Claim 5 was rejected as unpatentable over Brockmeyer.

Appellant repeats argument (1) that Brockmeyer is not a reference. Hence, the rejections are overcome.

Rule 192(c)(9) Appendix

Claim 1: A fast Fourier transform method, comprising the steps of:

- (a) storing data in sequence in memory;
- (b) partitioning a fast Fourier transform into three or more stages;
- (c) within each of said stages ordering the butterfly computations to correspond to said sequence.

Claim 2: The method of claim 1, further comprising the steps of:

- (a) providing a redundant twiddle factor table including a first set of twiddle factors plus a second set of twiddle factors wherein said second set is a subset of said first set.

Claim 3: A fast Fourier transform method, comprising the steps of:

- (a) providing N-point data where N is a positive integer;
- (b) computing radix-R butterflies in a block of N/R overlapping butterflies of said data where R is a positive integer;
- (c) computing radix-R butterflies in a first block of N/R^2 overlapping butterflies of the results of step (a); and
- (d) after step (c) computing radix-R butterflies in a second block of N/R^2 overlapping butterflies of the results of step (a).

Claim 4: The method of claim 3, wherein:

- (a) R equals 2.

Claim 5: The method of claim 3, wherein:

- (a) R equals 4.

Claim 6: The method of claim 3, further comprising:

(a) providing a redundant twiddle factor table including a first set of twiddle factors plus a second set of twiddle factors wherein said second set is a subset of said first set.

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From: Carlton H. Hoel
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David J. Hoyle
Serial No: 09/542,888
Filed: 4/4/2000
Art Unit: 2124
Examiner: C. Ngo
Docket No.: TI-28591
Conf. No.: 5971
Customer No.: 23494

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FACSIMILE COVER SHEET

<input checked="" type="checkbox"/> FACSIMILE COVER SHEET (1 SHEET)		<input type="checkbox"/> AMENDMENT	
<input type="checkbox"/> NEW APPLICATION		<input type="checkbox"/> EOT	
<input type="checkbox"/> DECLARATION		<input type="checkbox"/> NOTICE OF APPEAL	
<input type="checkbox"/> ASSIGNMENT		<input checked="" type="checkbox"/> APPEAL BRIEF (5 Pages)	
<input type="checkbox"/> FORMAL DRAWINGS		<input type="checkbox"/> ISSUE FEE	
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<input type="checkbox"/> CONTINUATION APP'N		<input checked="" type="checkbox"/> Fee Transmittal (1 page)	
<input type="checkbox"/> DIVISIONAL APP'N			
NAME OF INVENTOR(S): David J. Hoyle		RECEIPT DATE & SERIAL NO.: Serial No.: 09/542,888 Filing Date: 4/4/2000 Conf. No.: 5971	
TITLE OF INVENTION: Fast Fourier Transform			
TI FILE NO.: TI-28591	DEPOSIT ACCT. NO.: 20-0668		
FAXED: 12/30/2003 DUE: 12/31/2003 ATTY/SECY: CHH/gs			

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**FEE TRANSMITTAL
For FY 2004**

Effective 01/01/2003. Patent fees are subject to annual revision

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT****\$330.00****Complete If Known**

Application Number	09/542,888
Filing Date	04/04/2000
First Named Inventor	Doyle
Examiner Name	Ngo
Art Unit	2124
Attorney Docket No.	TI-28591

METHOD OF PAYMENT (Check all that apply)
☐ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ Credit Card Order
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20-0668

Texas Instruments Incorporated

The Director is authorized to: (check all that apply)

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☐ Charge any additional fee(s) during the pendency of this application
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FEE CALCULATION**1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 750	2001 375	Utility filing fee	
1002 330	2002 165	Design filing fee	
1003 520	2003 260	Plant filing fee	
1004 750	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	

SUBTOTAL (1)**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims	Extra Claims	Fee from below	Fee Paid
6	20 **	0 X \$18	0
2	3 **	0 X \$84	0

Multiple Dependent

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1202 18	2202 9	Claims in excess of 20	
1201 84	2201 42	Independent claims in excess of 3	
1203 280	2203 140	Multiple dependent claim, if not paid	
1204 84	2204 42	**Reissue independent claims over original patent	
1205 18	2205 9	**Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2)**\$0**

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity		Small Entity		Fee Description	Fees Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	205	Extension for reply within second month	
1253	950	2253	465	Extension for reply within third month	
1254	1,480	2254	725	Extension for reply within fourth month	
1401	330	2401	160	Notice of Appeal	
1402	330	2402	160	Filing a brief in support of an appeal	\$330.00
1403	290	2403	140	Request for Oral Hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	650	Petition to revive - unintentional	
1501	1,330	2501	650	Utility Issue fee (or reissue)	
1503	630	2503	315	Plant Issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(a)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(b))	
1810	770	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	375	Request for Continuation Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)**(\$330.00)****SUBMITTED BY**

(Complete if applicable)

Name (Print/Type)	Carlton H. Hoel	Registration No. (Attorney/Agent)	29,934	Telephone	(972) 917-4365
Signature		Date	12/30/2003		

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